



## Suggested Uses:

Norcote® UT Series is a UV curable ink system designed for decoration on polycarbonate and some pre-treated polyester commonly used for membrane overlays where transparent window colors are needed. The UT has good adhesion characteristics with our 02, 04, 80, FLT, IM, MI and MSK ink systems. **It is the responsibility of the end user to pretest all substrates with Norcote® products prior to use in production.**

## Product Features

- Fast Cure Rates
- Excellent Clarity
- Non-haloing
- Good Intercoat Adhesion across multiple Norcote ink lines

## Printing Recommendations:

All inks are supplied at print-ready viscosity, but should be thoroughly mixed prior to each use. Colors can be used individually or blended to achieve additional colors. If adjustment is needed the UT-849 Clear can be used to thin the ink and reduce color strength. The UVOTH (Universal Thinner) may be used in place of the clear when necessary.

## Mesh:

A mesh count of 305-420 threads per linear inch (120-165 threads per cm<sup>2</sup>) monofilament polyester mesh is recommended for most applications. Tension should range from 18-25 N/cm<sup>2</sup> on a rigid frame.

## Stencil:

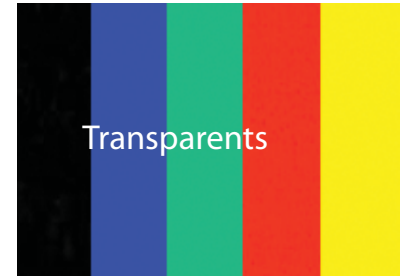
Use of UV compatible direct and thin capillary films (15-25µ) are recommended.

## Squeegee:

Inks can be printed with polyurethane squeegee and durometers ranging from 60-90.

## Curing Parameters:

The UT Series performs best in non-nitrogen atmosphere curing units, inert atmosphere curing units limit the depth of cure. Curing speeds depend on several factors including ink film thickness and the energy level of the lamps. Ink should be cured immediately after printing.



## Curing Equipment:

The UT Series inks are fast curing and work well with one 300 watts/in (120 watts/cm) or two 200 watt/in (80 watts/cm) medium pressure mercury vapor lamps. The minimum requirement is 200 mJ/cm.

## Screen Cleaning:

Most conventional solvent cleaners work well. Alcohol based solutions must be avoided as they break down the emulsion. Norcote recommends Press Wash 110 (flash point 113° F), 140 (flash point 140° F) or NSW-824 (flash point 150° F). These products are used for cleaning ink off screens during on press color changes or before storing the screen. They work well when removing ink from squeegees, flood bars and other equipment. Contact us for packaging options.

## Coverage:

Approximately 550 square feet per KG (50 square meters per KG) depending on printing variables affecting ink film thickness and coverage.

## Mixing:

All Norcote® UT Series colors are intermixable. Addition of any other ink series will impair UT Series clarity and performance.

## Adhesion:

The UT Series is a nonvisual post-curing system. Although further cross-linking occurs up to 24 hours later, the UT Series inks should pass a crosshatch tape test, (ASTM #D3359-97), using 3-M 600 tape after exiting the curing unit and cooling to room temperature.

## Precautions:

Avoid direct contact of ink with skin and clothing. If contact occurs, wash affected area with warm soapy water and dry thoroughly. If eye contact occurs, irrigate the area with water for 15 minutes and consult a physician. For more specific information, refer to the Material Safety Data Sheet.

**Intercoat Adhesion:**

UT Series inks have a good intercoat adhesion. However, it should be monitored throughout the production run especially if multiple ink passes are completed.

**Weatherability:**

The UT Series have not been tested for outdoor weatherability. However, it has been tested for interior light fastness per SAE J1885 specification requirements.

**Color Range:**

Special colors can be matched at Norcote® per customer requirements.

Transparent Black	805KG
Transparent Yellow	812KG
Transparent Red (YS)	821KG
Transparent Red	822KG
Transparent Magenta	823KG
Transparent Green	830KG
Transparent Blue	834KG
Transparent Violet	835KG* Halogen Free
Transparent Clear	849KG



\* Halogen free per the International Electrotechnical Commission standard IEC 61249-2-21.

**Key Additives:**

Thoroughly mix all additives both prior to and after addition into base inks. Store additives in a tightly sealed container.

**Additives:**

Check the Norcote Additives list for the products compatible with this ink series. The list is available on our website at [www.norcote.com](http://www.norcote.com) or call us at 800-488-9180 to receive a copy.

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**Storage & Available Warranties:**

All UT Series inks should be stored in tightly closed, black polyethylene containers in an area with temperature not to exceed 90° F (32.2°C). Avoid direct sunlight and indirect white light. Excess ink from print runs should be stored in separate containers to avoid contamination and is not covered under any warranty. When stored under these conditions, Norcote warrants the Products shall be free from defects in material and manufacture for a period of one (1) year from the date of sale for the UT ink Series standard inks with no additives. **Norcote will not warrant any inks intermixed with Norcote non Uni-T ink systems or competitor products. Any warranties provided will be limited to the price paid for the actual products used which give rise to the warranty claim.**

This technical bulletin is intended to be used for informational purposes only, and is in no way intended to create any warranties or other obligations on behalf of Norcote. All warranties, terms and /or conditions for a particular product will be specified on the applicable invoice and are only valid upon the creation of a legally-binding contract.

**Testing**

Due to the inability of Norcote to anticipate or control the conditions under which the Products and information relating thereto will be used and stored, Norcote cannot guarantee the results obtained from using the Products. Any Suggested Uses are merely representative, and because the final product will depend on a number of specific factors, the end user should pretest all substrates with the Products prior to use in production.

**PVC Plastics:**

Decoration can aggravate embrittlement properties of PVC plastics which can lead to cracking and failure of the plastic. It is strongly recommended that the end user contact the polymer manufacturer to obtain information on the suitability for decorating with a UV ink as well as recommendations for molding/processing to reduce this potential. As every situation can not be tested for in a laboratory environment, it is the responsibility of the end user to determine suitability of the products chosen for an end application.